

FIG. 1

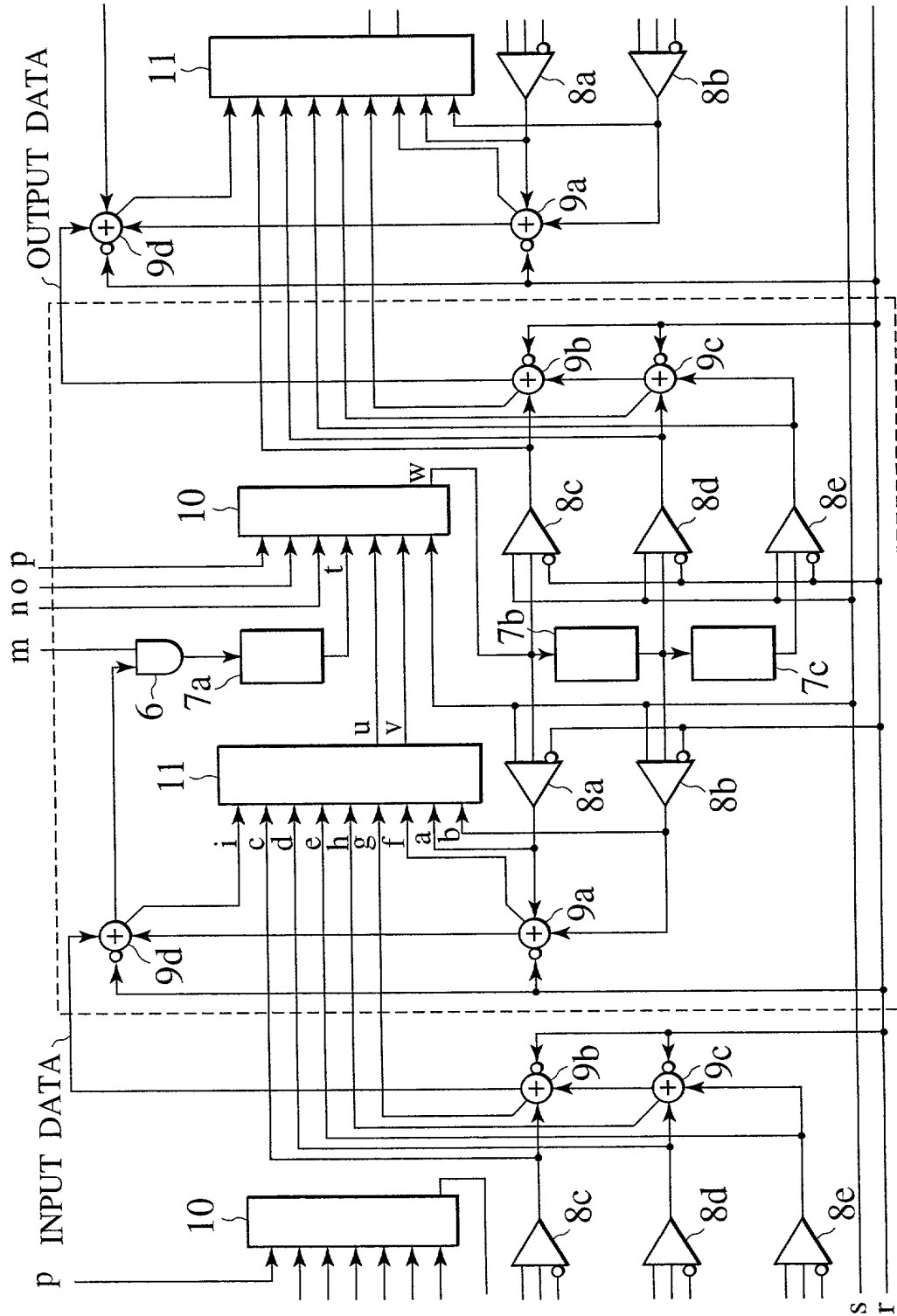


FIG.2

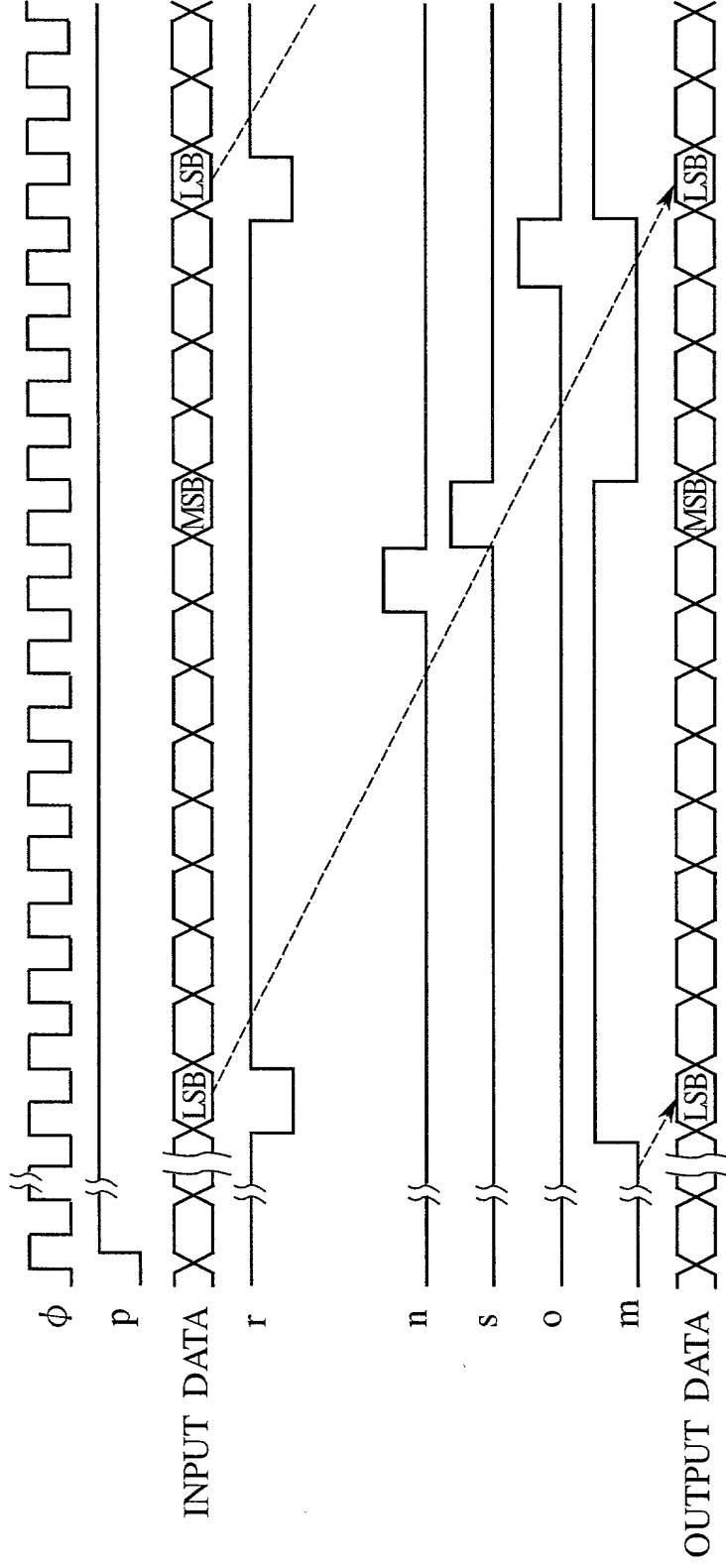


FIG.3(a)

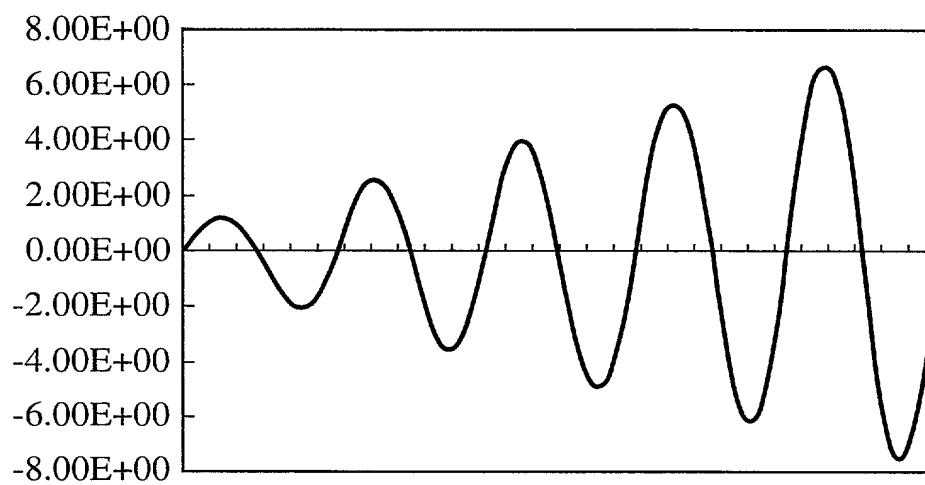


FIG.3(b)

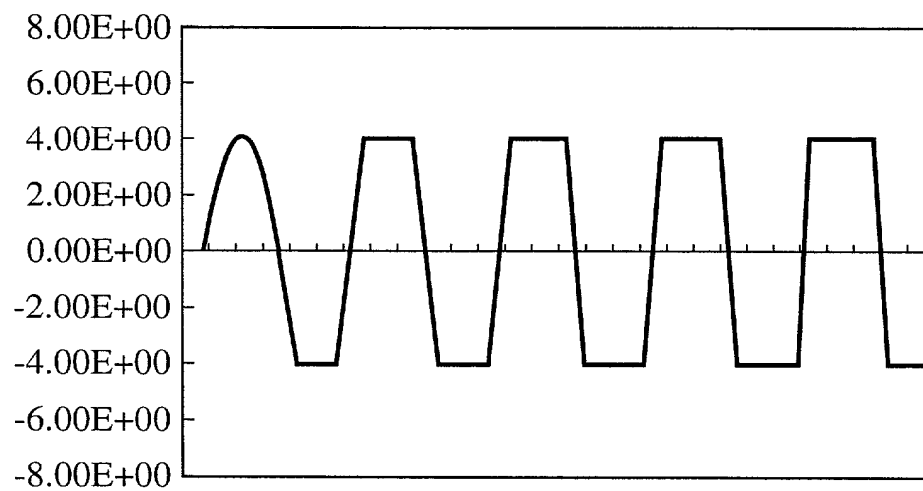


FIG.4

INTERMEDIATE SUM S				TRUE SUM Z=S-5				SIGN	CONDITION		
S3	S2	S1	S0	Z3	Z2	Z1	Z0				
0	0	0	0	(0)	1	0	1	1	(-5)	-	OVERFLOW
0	0	0	1	(1)	1	1	0	0	(-4)	-	OVERFLOW
0	0	1	0	(2)	1	1	0	1	(-3)	-	OVERFLOW
0	0	1	1	(3)	1	1	1	0	(-2)	-	OVERFLOW
0	1	0	0	(4)	1	1	1	1	(-1)	-	
0	1	0	1	(5)	0	0	0	0	(0)	+	
0	1	1	0	(6)	0	0	0	1	(1)	+	OVERFLOW
0	1	1	1	(7)	0	0	1	0	(2)	+	OVERFLOW
1	0	0	0	(8)	0	0	1	1	(3)	+	OVERFLOW
1	0	0	1	(9)	0	1	0	0	(4)	+	OVERFLOW

FIG.5

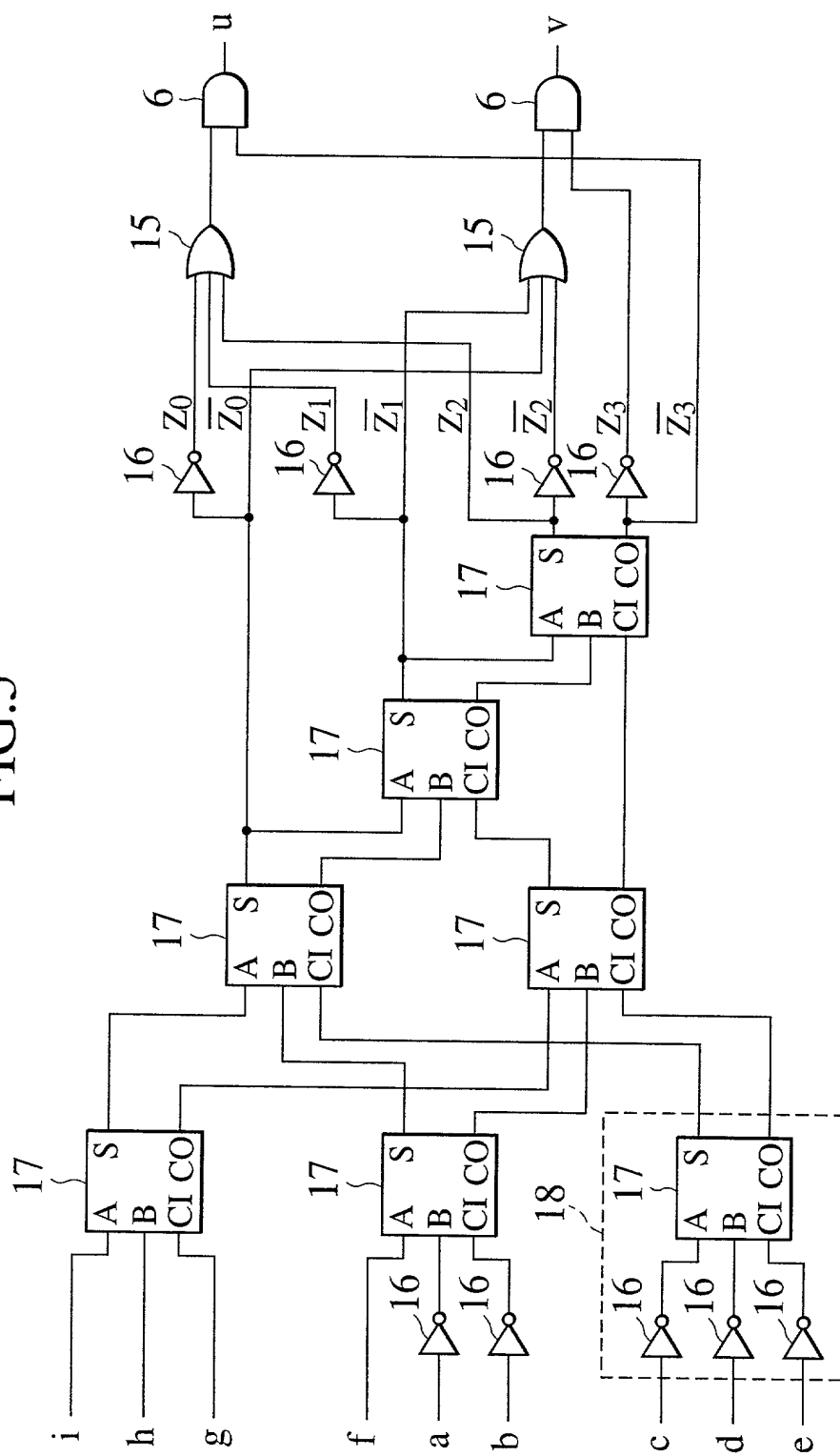


FIG.6

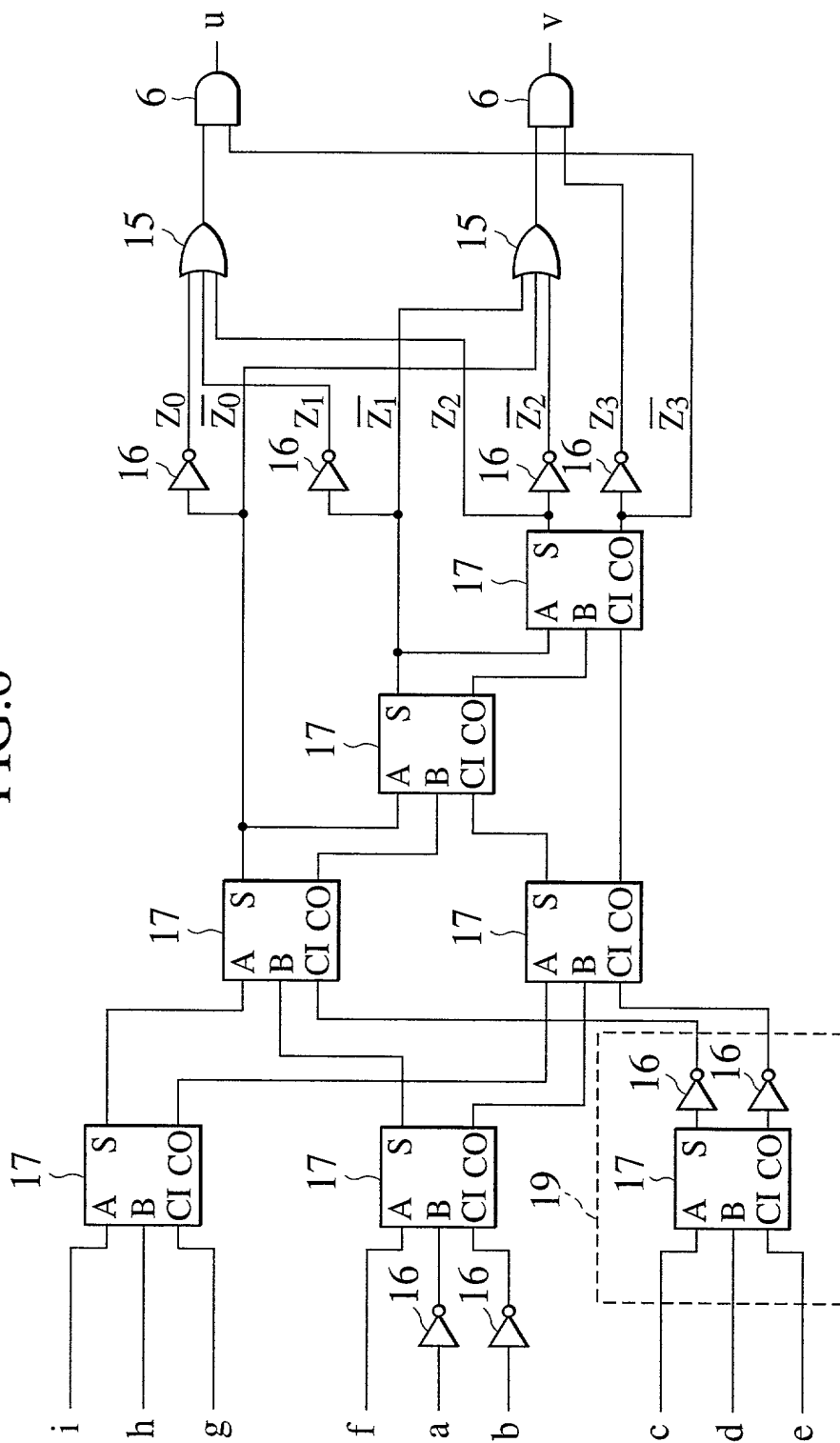


FIG. 7

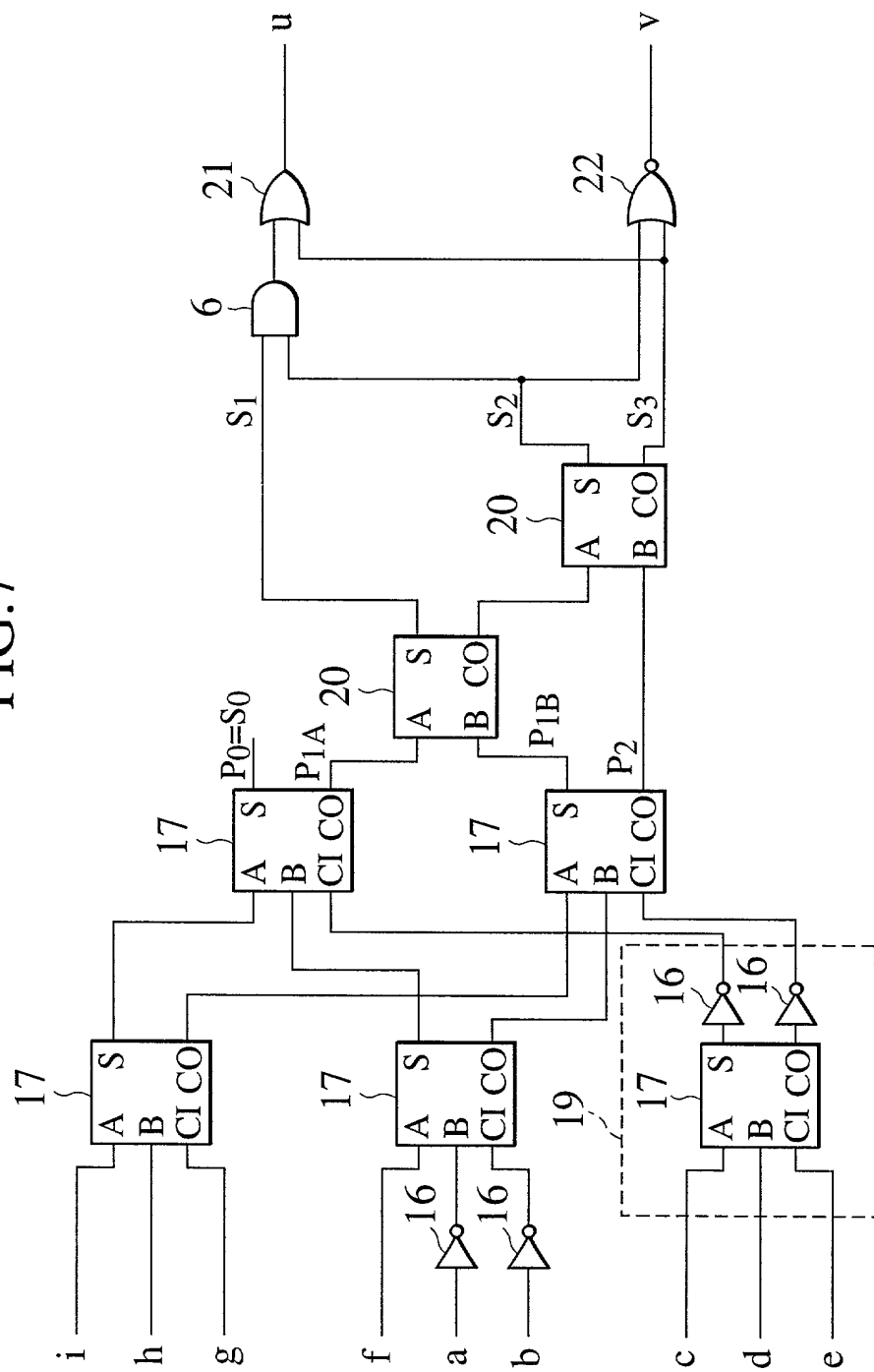


FIG.8

INTERMEDIATE SUM S'	TRUE SUM Z=4-S'				SIGN	CONDITION
S3'S2'S1'S0'	Z3	Z2	Z1	Z0		
0 0 0 0 (0)	0	1	0	0 (4)	+	OVERFLOW
0 0 0 1 (1)	0	0	1	1 (3)	+	OVERFLOW
0 0 1 0 (2)	0	0	1	0 (2)	+	OVERFLOW
0 0 1 1 (3)	0	0	0	1 (1)	+	OVERFLOW
0 1 0 0 (4)	0	0	0	0 (0)	+	
0 1 0 1 (5)	1	1	1	1 (-1)	-	
0 1 1 0 (6)	1	1	1	0 (-2)	-	OVERFLOW
0 1 1 1 (7)	1	1	0	1 (-3)	-	OVERFLOW
1 0 0 0 (8)	1	1	0	0 (-4)	-	OVERFLOW
1 0 0 1 (9)	1	0	1	1 (-5)	-	OVERFLOW



FIG.9

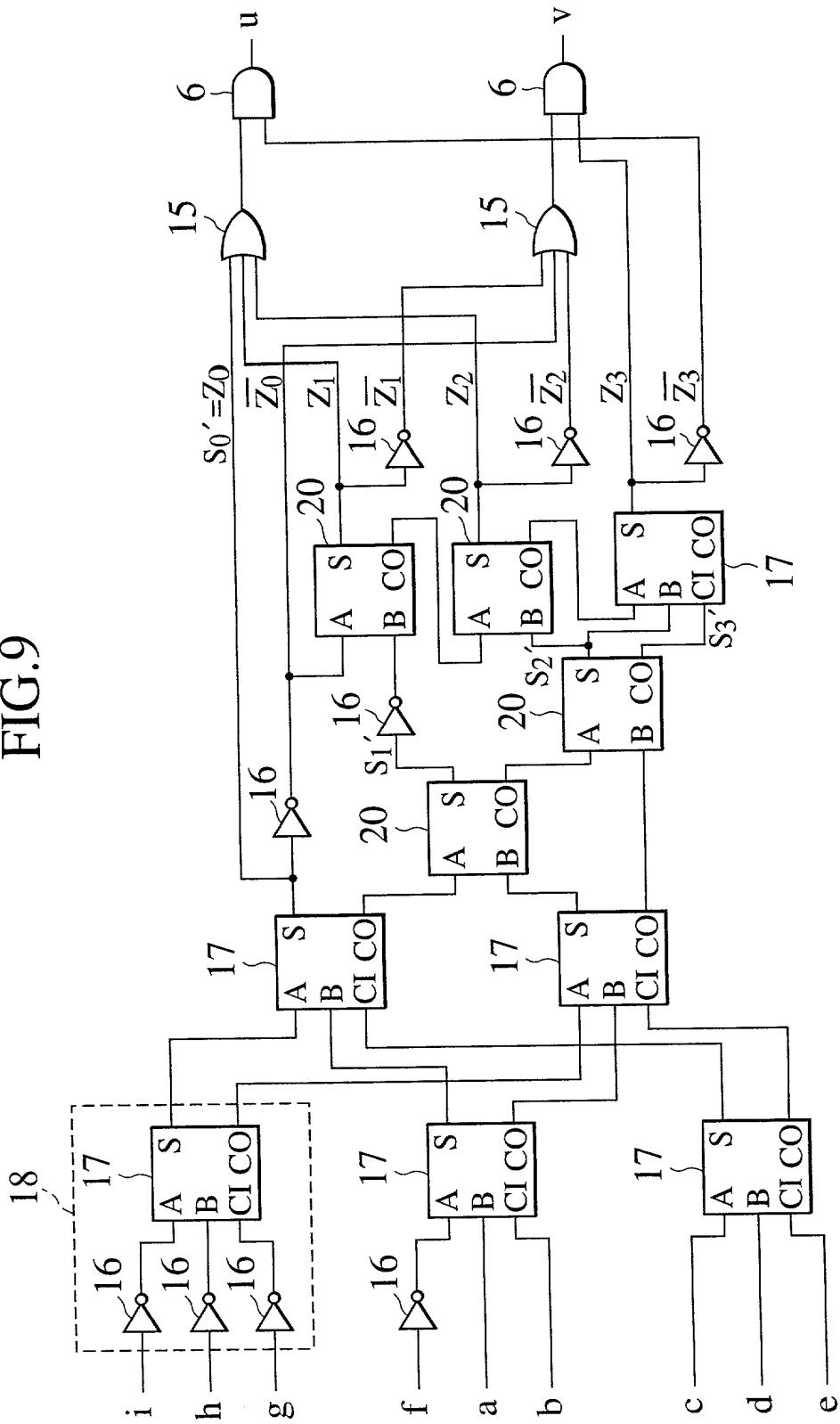


FIG.10

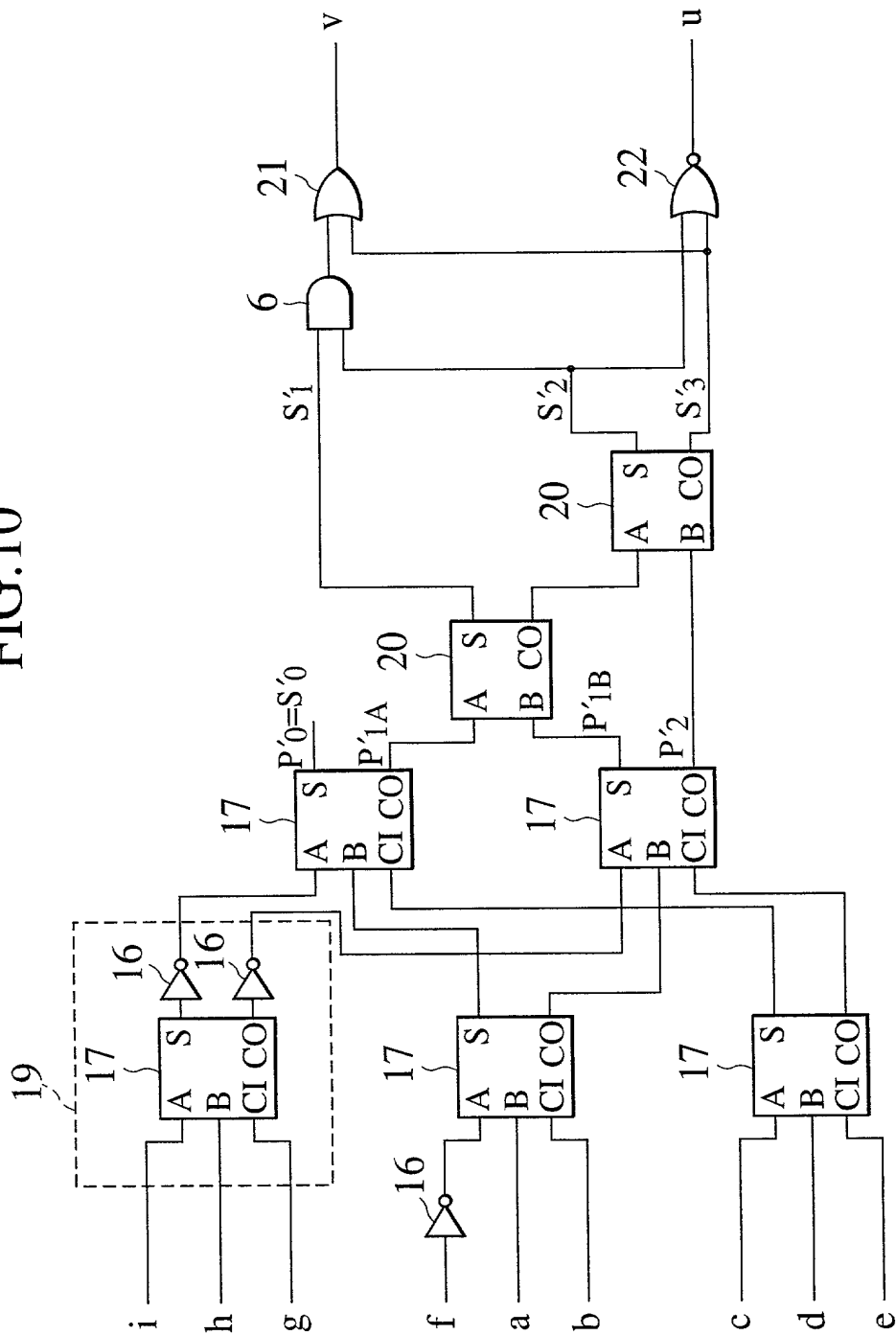


FIG.11

REDUNDANT BINARY	INTERMEDIATE SUM S	TRUE SUM Z=S-5	SIGN	CONDITION
P2 P1B P1A P0				
0 0 0 0	0000 (0)	1011 (-5)	-	OVERFLOW
0 0 0 1	0001 (1)	1100 (-4)	-	OVERFLOW
0 0 1 0	0010 (2)	1101 (-3)	-	OVERFLOW
0 0 1 1	0011 (3)	1110 (-2)	-	OVERFLOW
0 1 0 0	0010 (2)	1101 (-3)	-	OVERFLOW
0 1 0 1	0011 (3)	1110 (-2)	-	OVERFLOW
0 1 1 0	0100 (4)	1111 (-1)	-	
0 1 1 1	0101 (5)	0000 (0)	+	
1 0 0 0	0100 (4)	1111 (-1)	-	
1 0 0 1	0101 (5)	0000 (0)	+	
1 0 1 0	0110 (6)	0001 (1)	+	OVERFLOW
1 0 1 1	0111 (7)	0010 (2)	+	OVERFLOW
1 1 0 0	0110 (6)	0001 (1)	+	OVERFLOW
1 1 0 1	0111 (7)	0010 (2)	+	OVERFLOW
1 1 1 0	1000 (8)	0011 (3)	+	OVERFLOW
1 1 1 1	1001 (9)	0100 (4)	+	OVERFLOW

FIG.12

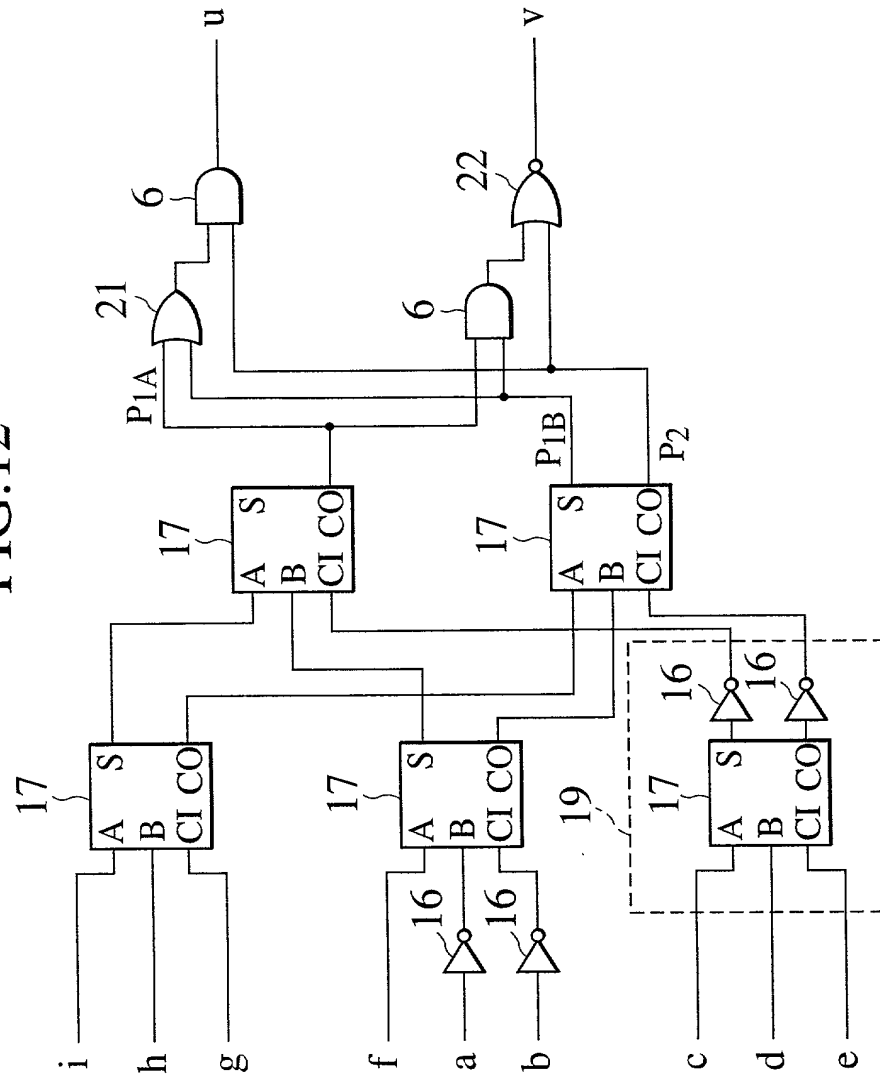


FIG. 13

FIG.13

REDUNDANT BINARY P2' P1B' P1A' P0'	INTERMEDIATE SUM S'	TRUE SUM Z=4-S'	SIGN	CONDITION
0 0 0 0	0 0 0 0 (0)	0 1 0 0 (4)	+	OVERFLOW
0 0 0 1	0 0 0 1 (1)	0 0 1 1 (3)	+	OVERFLOW
0 0 1 0	0 0 1 0 (2)	0 0 1 0 (2)	+	OVERFLOW
0 0 1 1	0 0 1 1 (3)	0 0 0 1 (1)	+	OVERFLOW
0 1 0 0	0 0 1 0 (2)	0 0 1 0 (2)	+	OVERFLOW
0 1 0 1	0 0 1 1 (3)	0 0 0 1 (1)	+	OVERFLOW
0 1 1 0	0 1 0 0 (4)	0 0 0 0 (0)	+	
0 1 1 1	0 1 0 1 (5)	1 1 1 1 (-1)	-	
1 0 0 0	0 1 0 0 (4)	0 0 0 0 (0)	+	
1 0 0 1	0 1 0 1 (5)	1 1 1 1 (-1)	-	
1 0 1 0	0 1 1 0 (6)	1 1 1 0 (-2)	-	OVERFLOW
1 0 1 1	0 1 1 1 (7)	1 1 0 1 (-3)	-	OVERFLOW
1 1 0 0	0 1 1 0 (6)	1 1 1 0 (-2)	-	OVERFLOW
1 1 0 1	0 1 1 1 (7)	1 1 0 1 (-3)	-	OVERFLOW
1 1 1 0	1 0 0 0 (8)	1 1 0 0 (-4)	-	OVERFLOW
1 1 1 1	1 0 0 1 (9)	1 0 1 1 (-5)	-	OVERFLOW



FIG.15

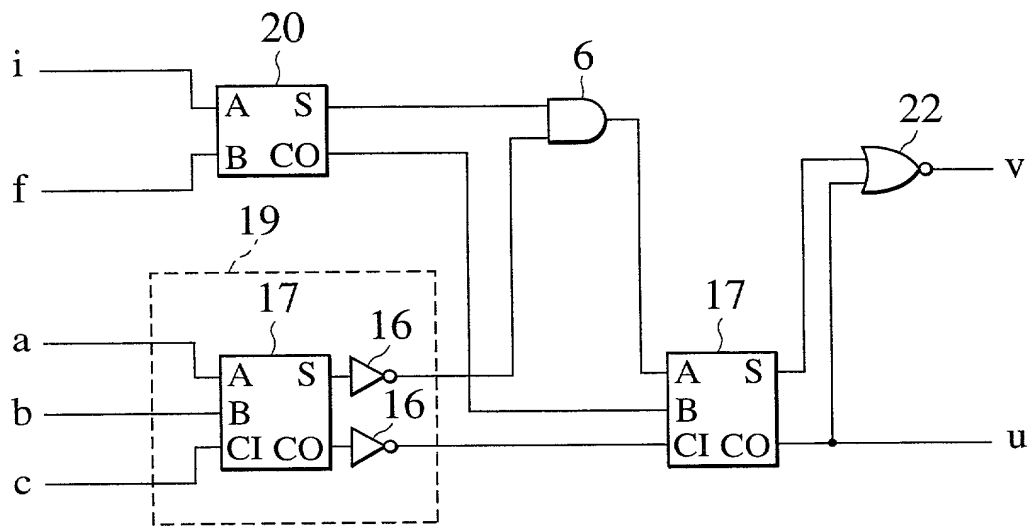


FIG.16

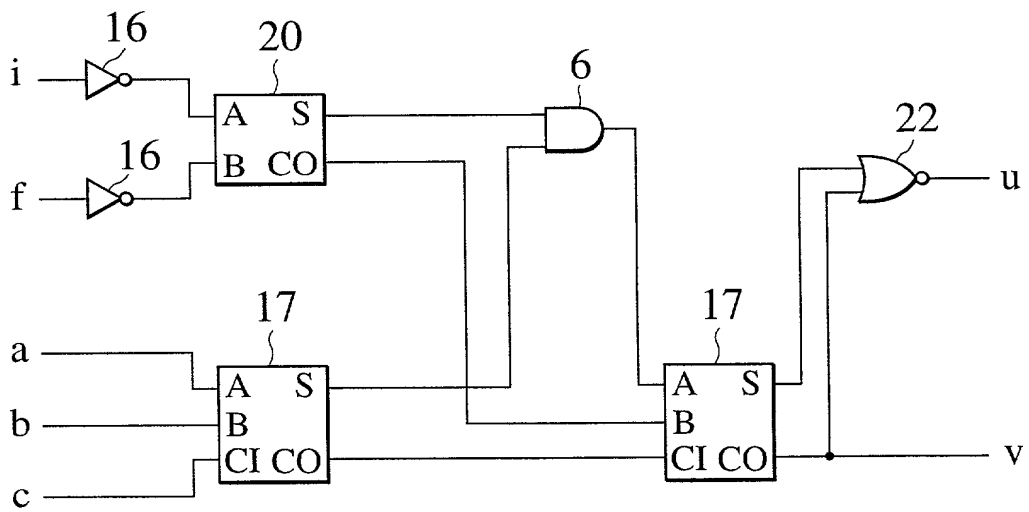


FIG.18

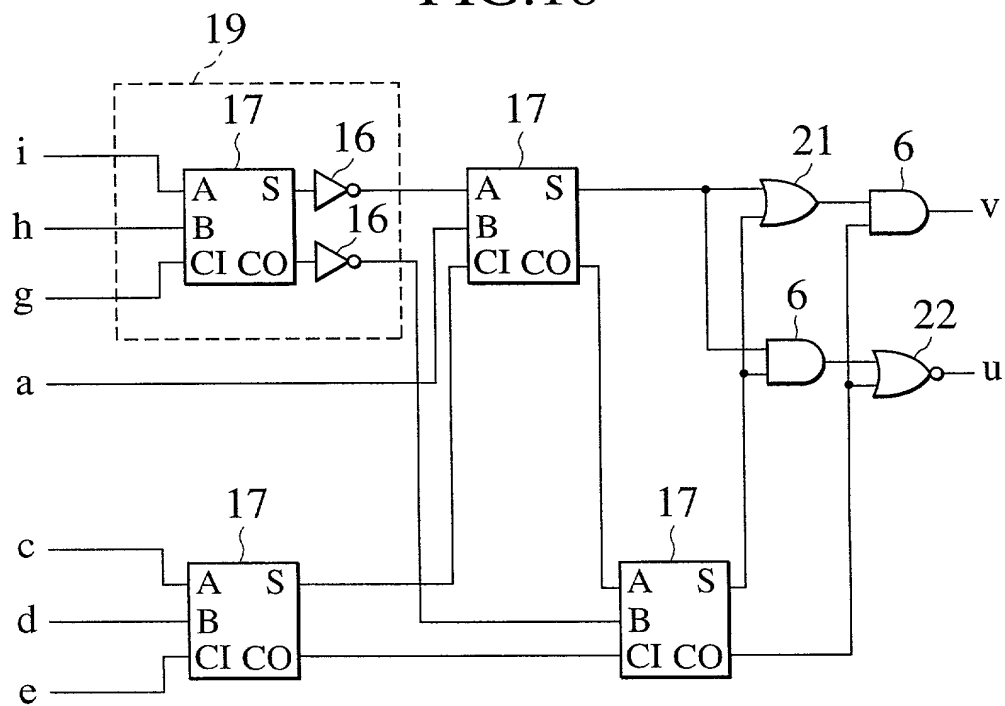




FIG.19

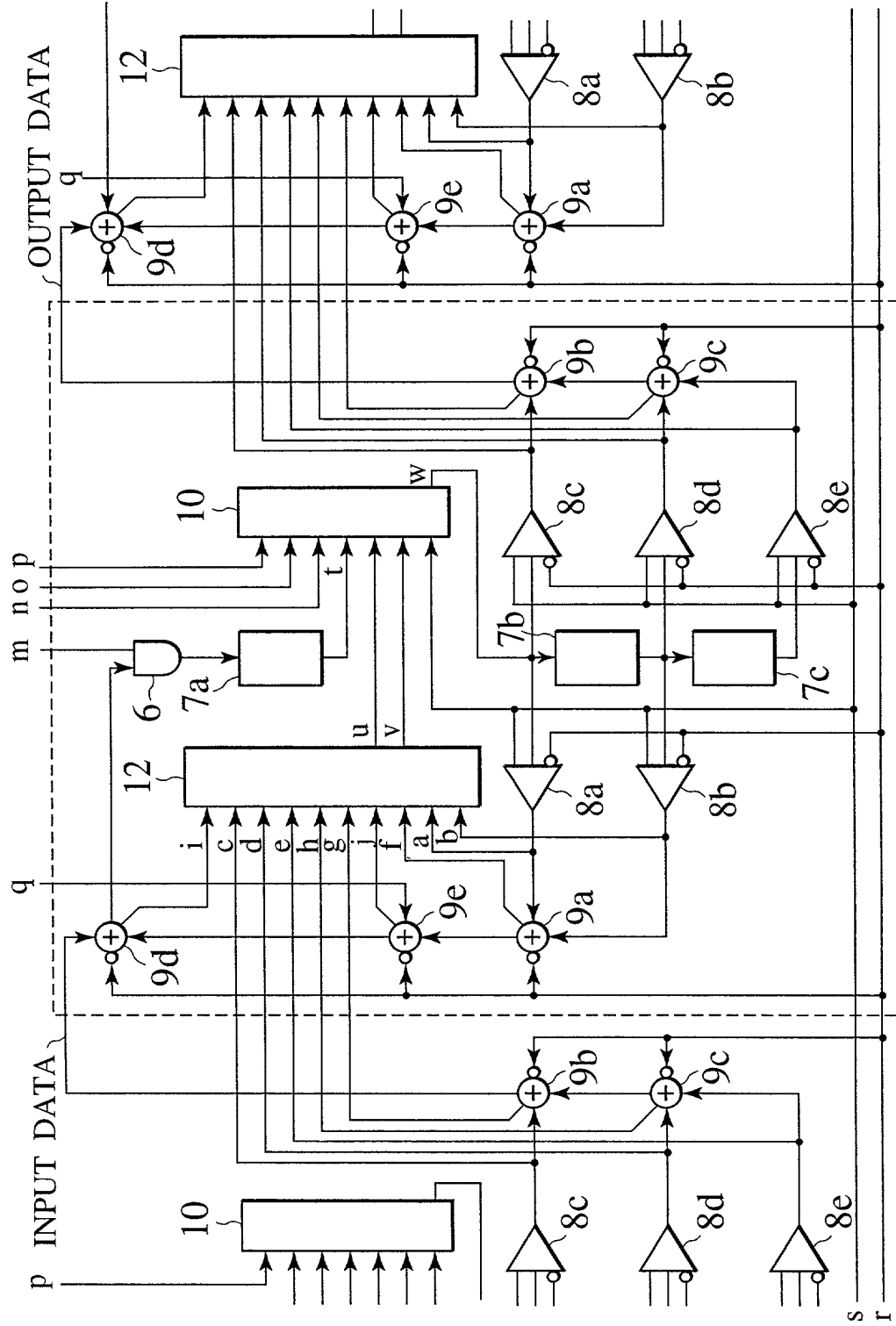


FIG.20

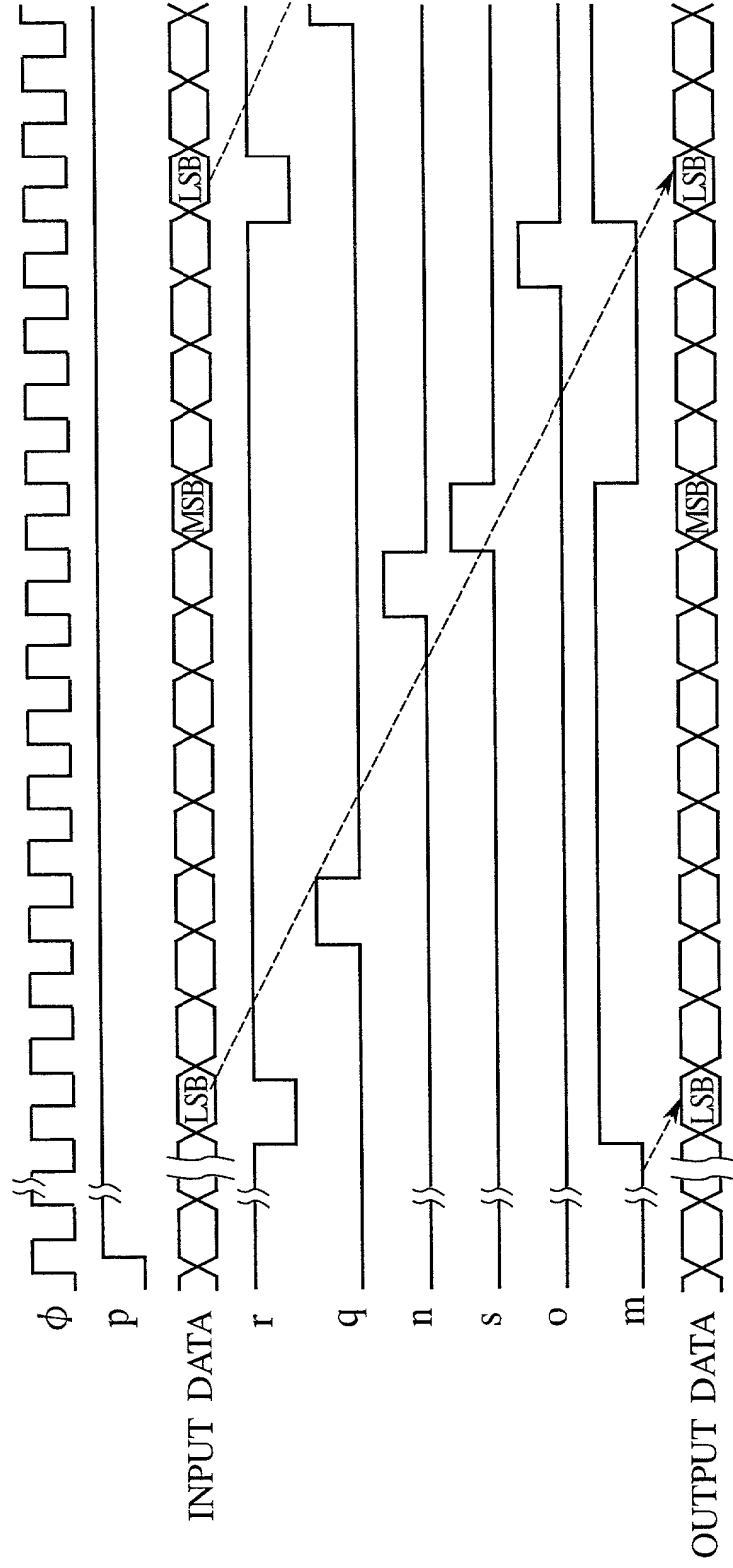


FIG. 21

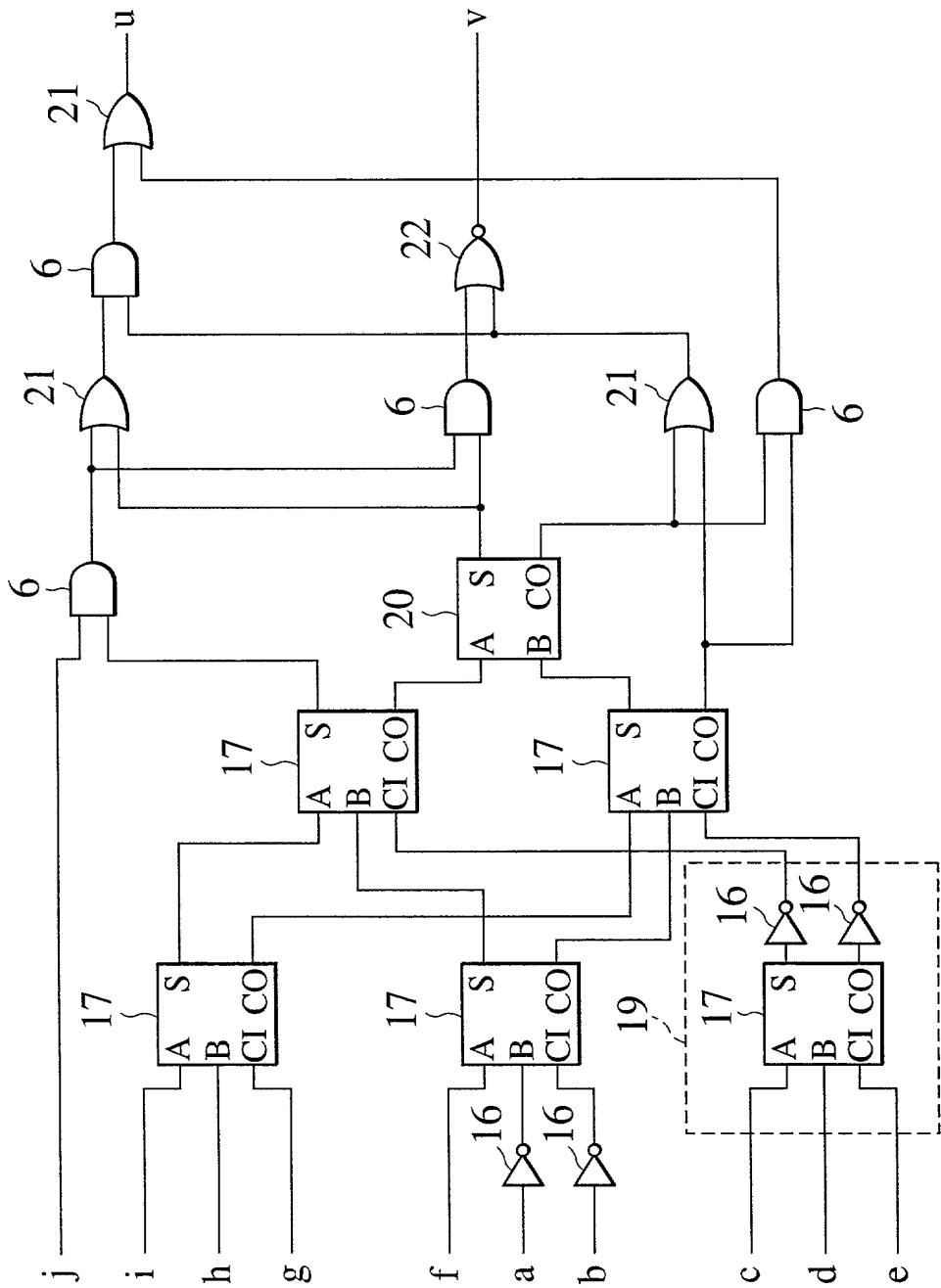


FIG.22

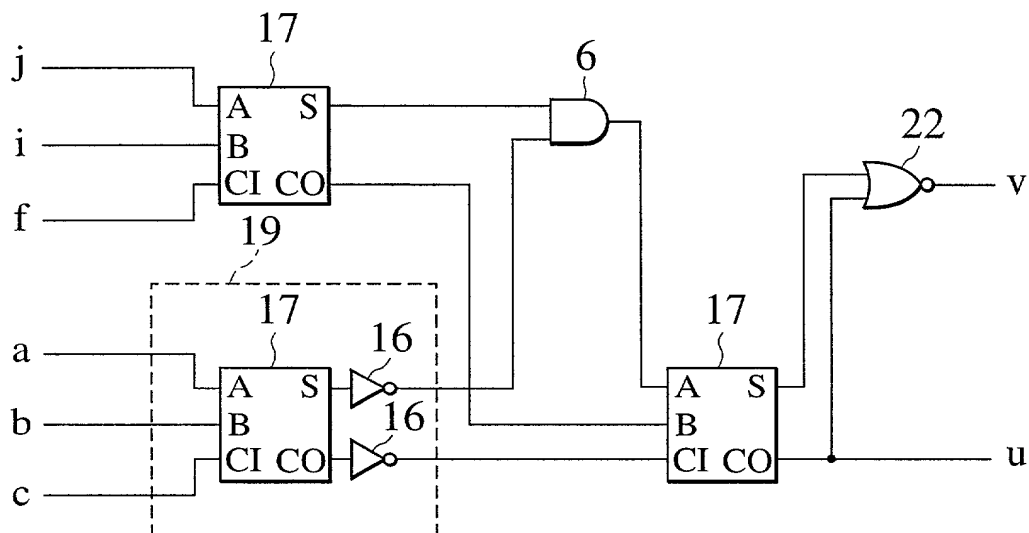


FIG.23

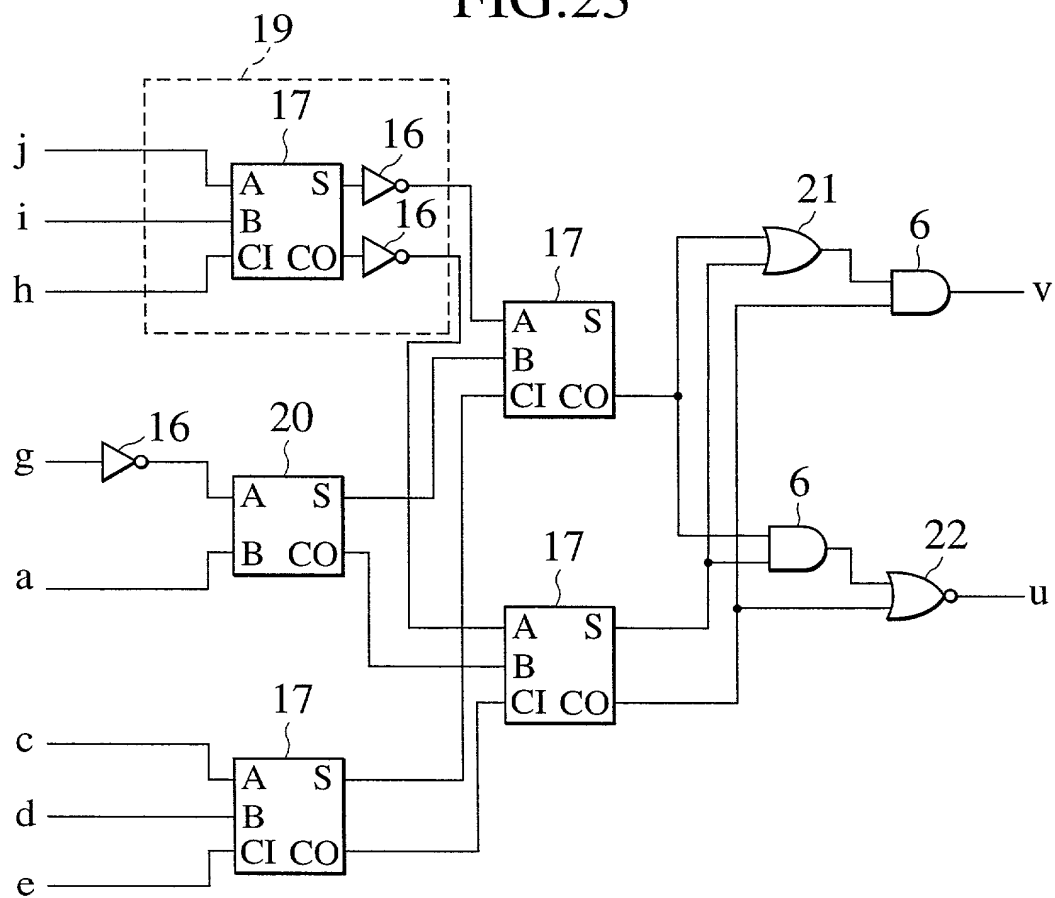


FIG.24

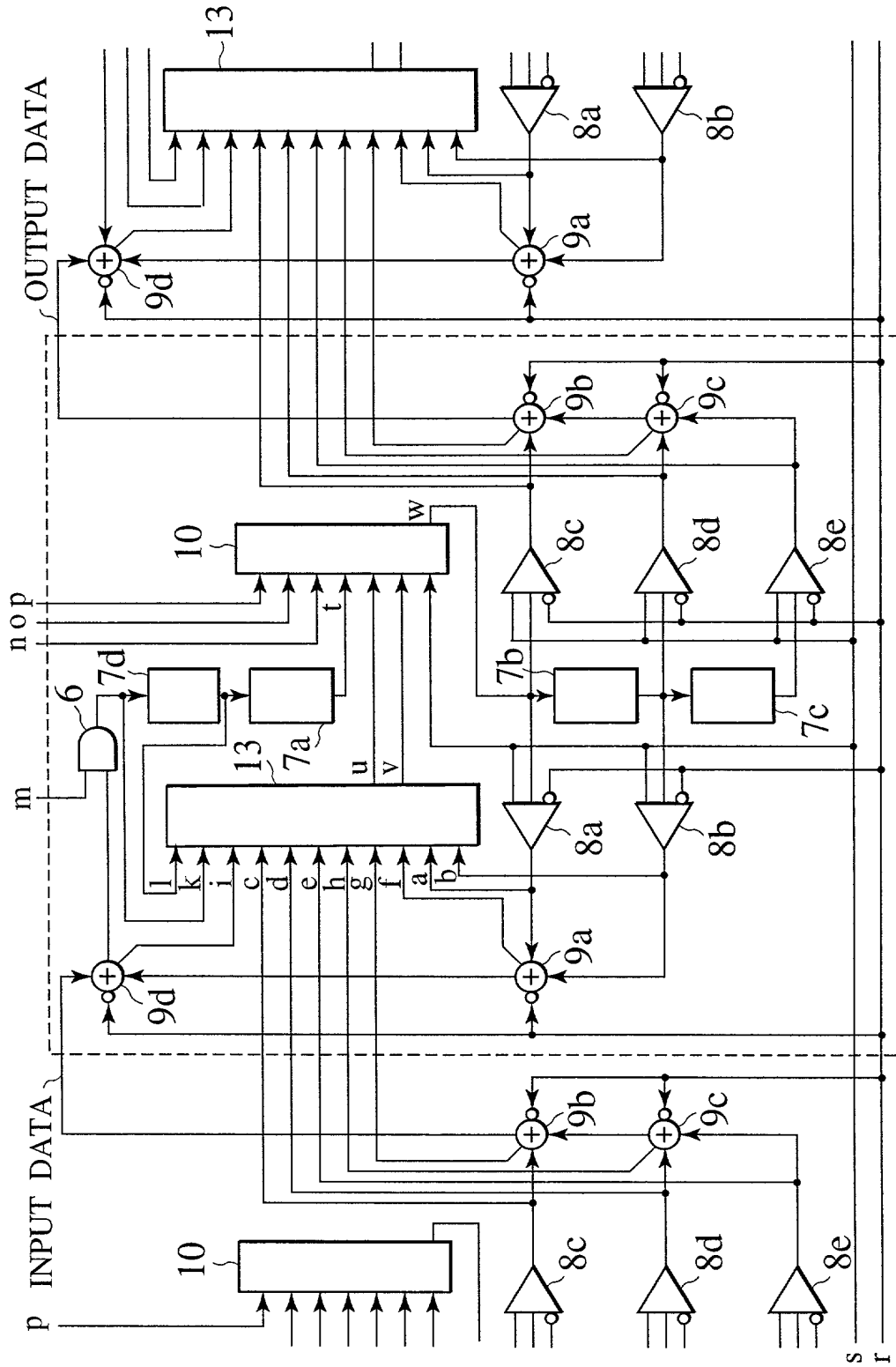


FIG.25

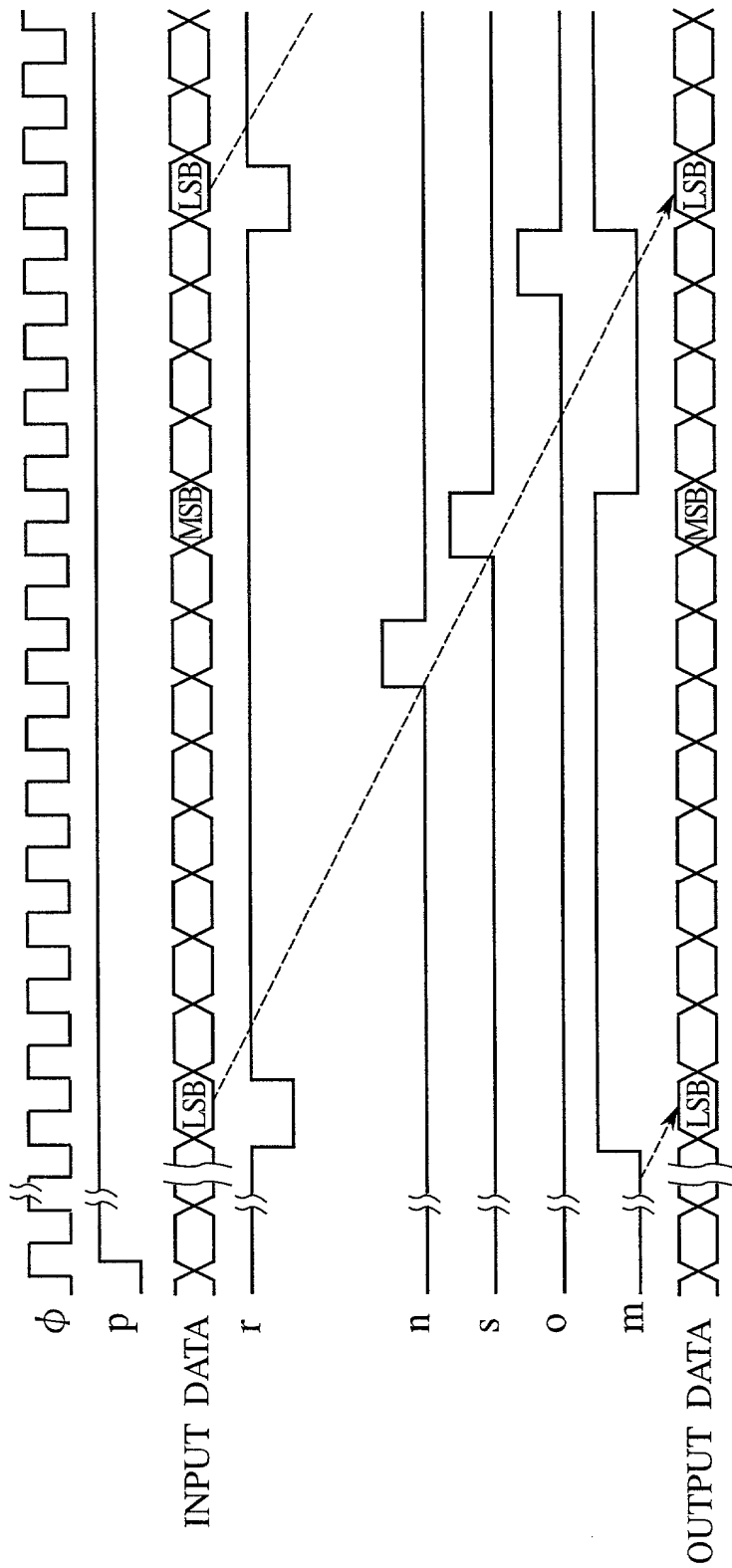


FIG.26

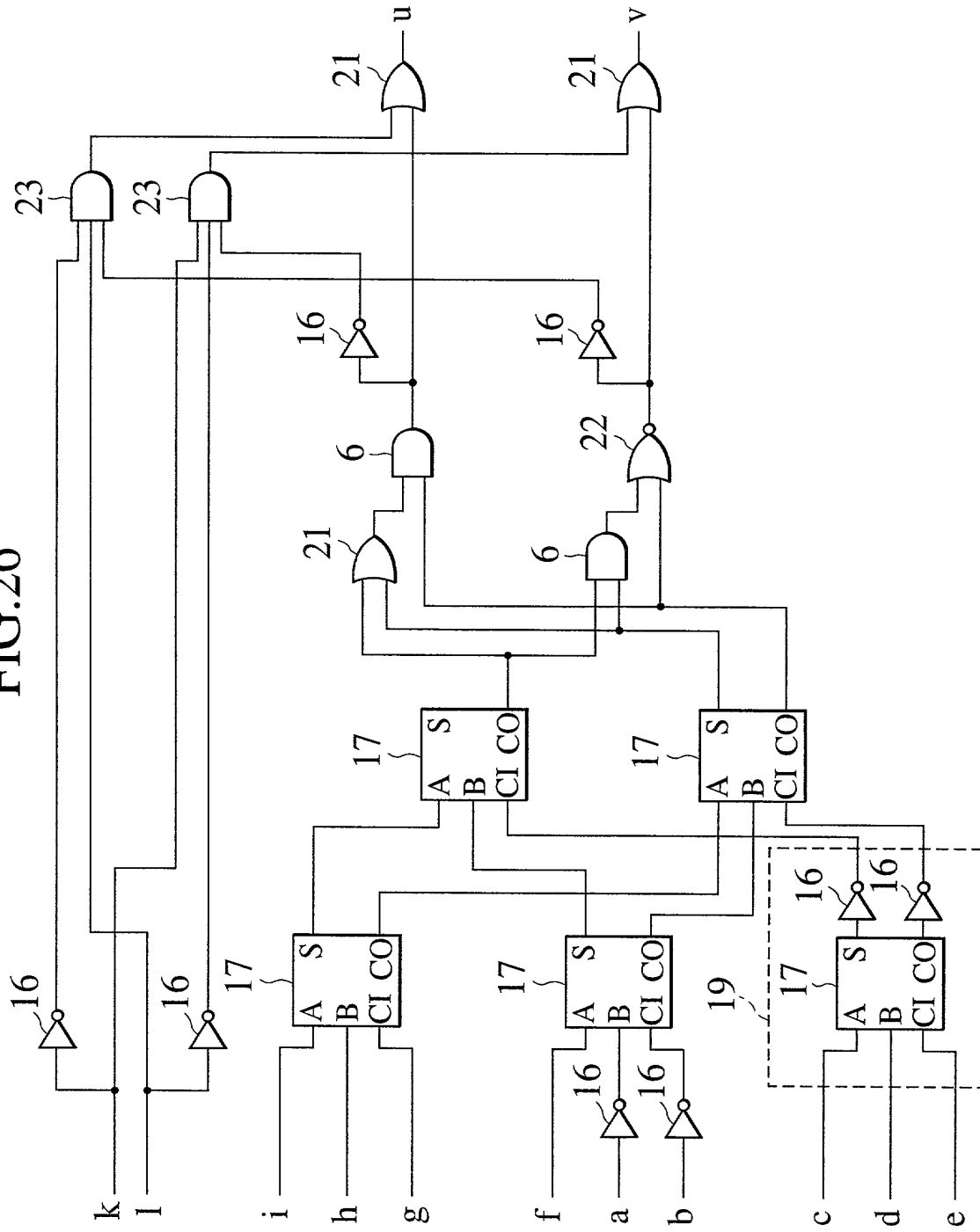


FIG.27

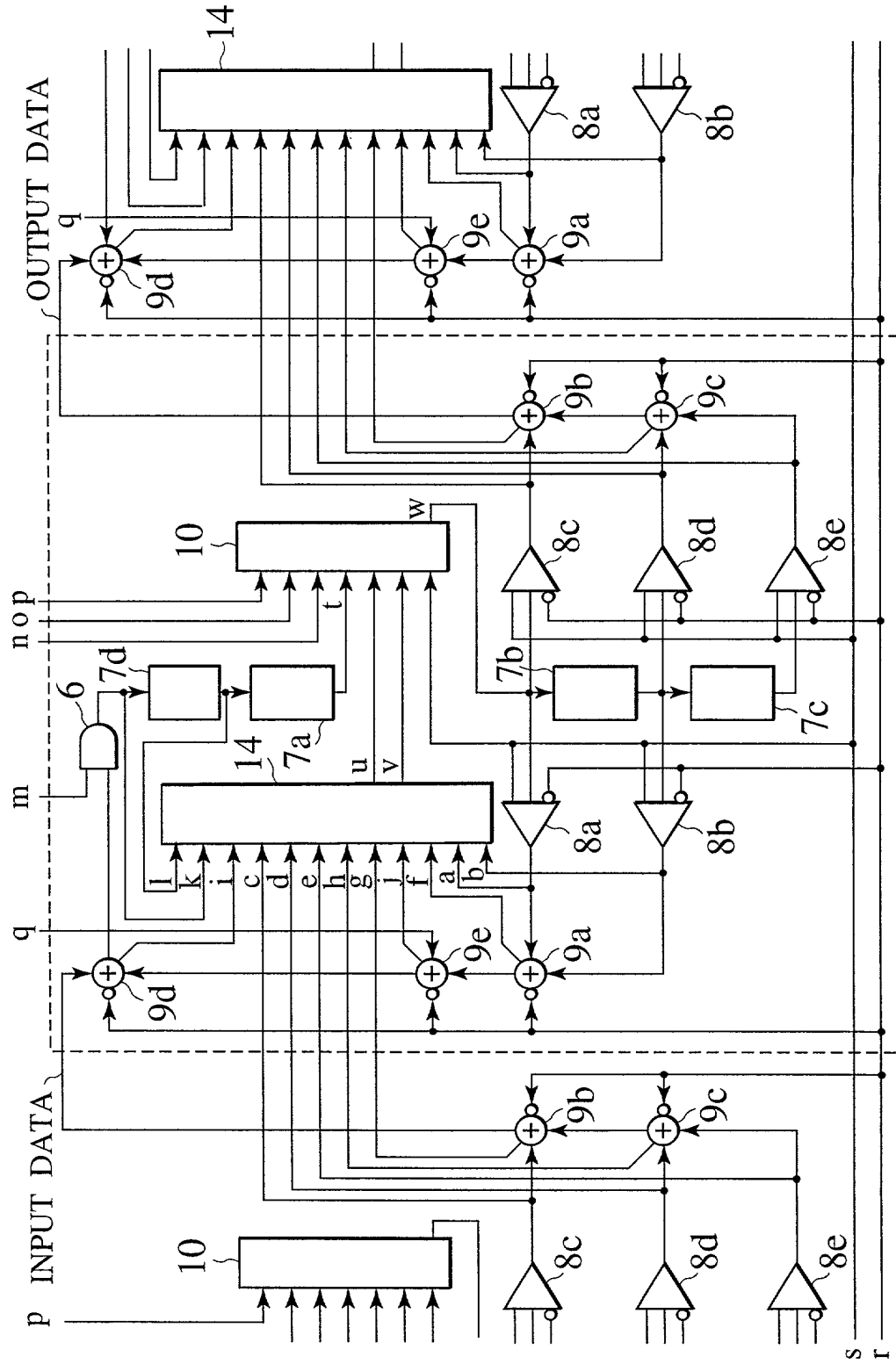




FIG.28

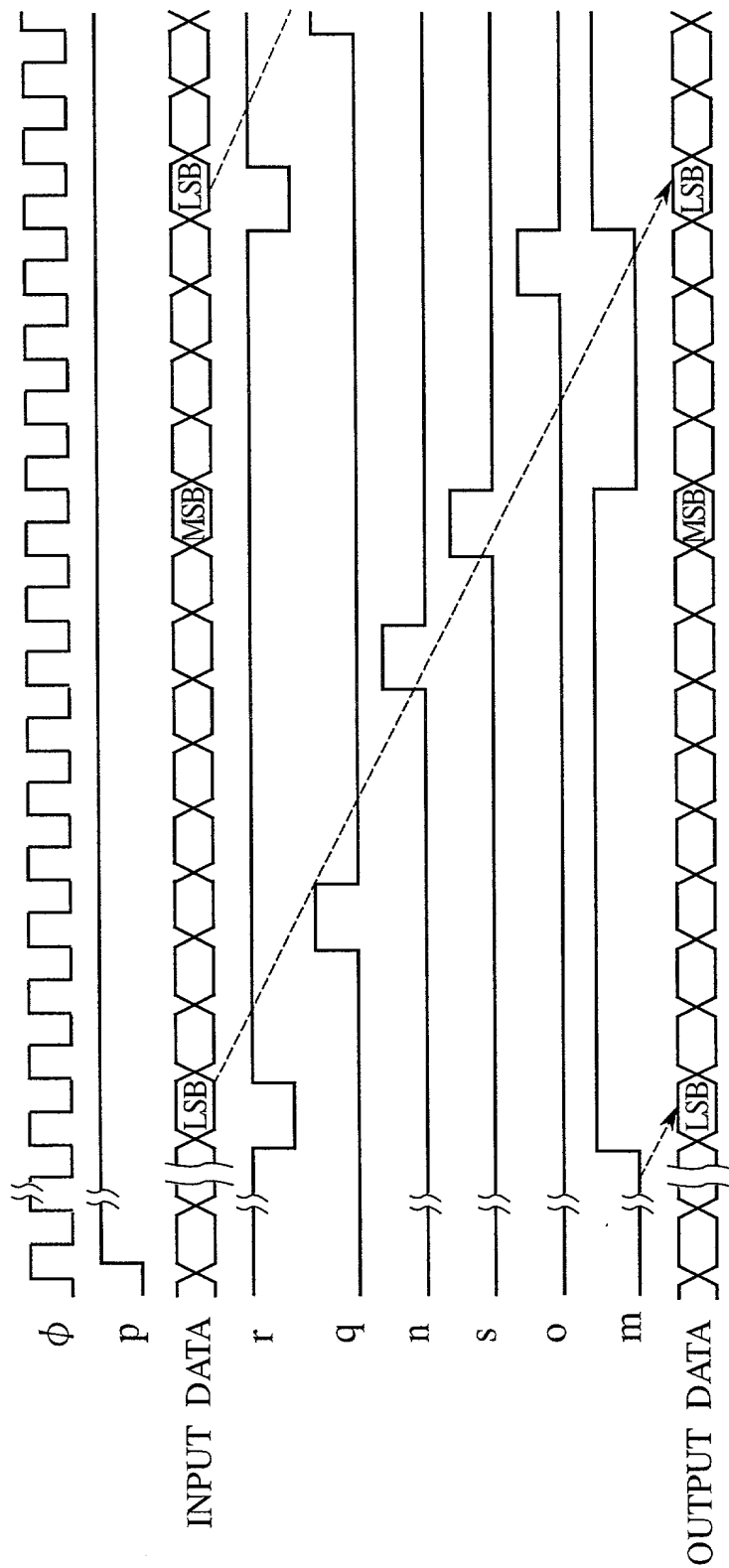


FIG.29

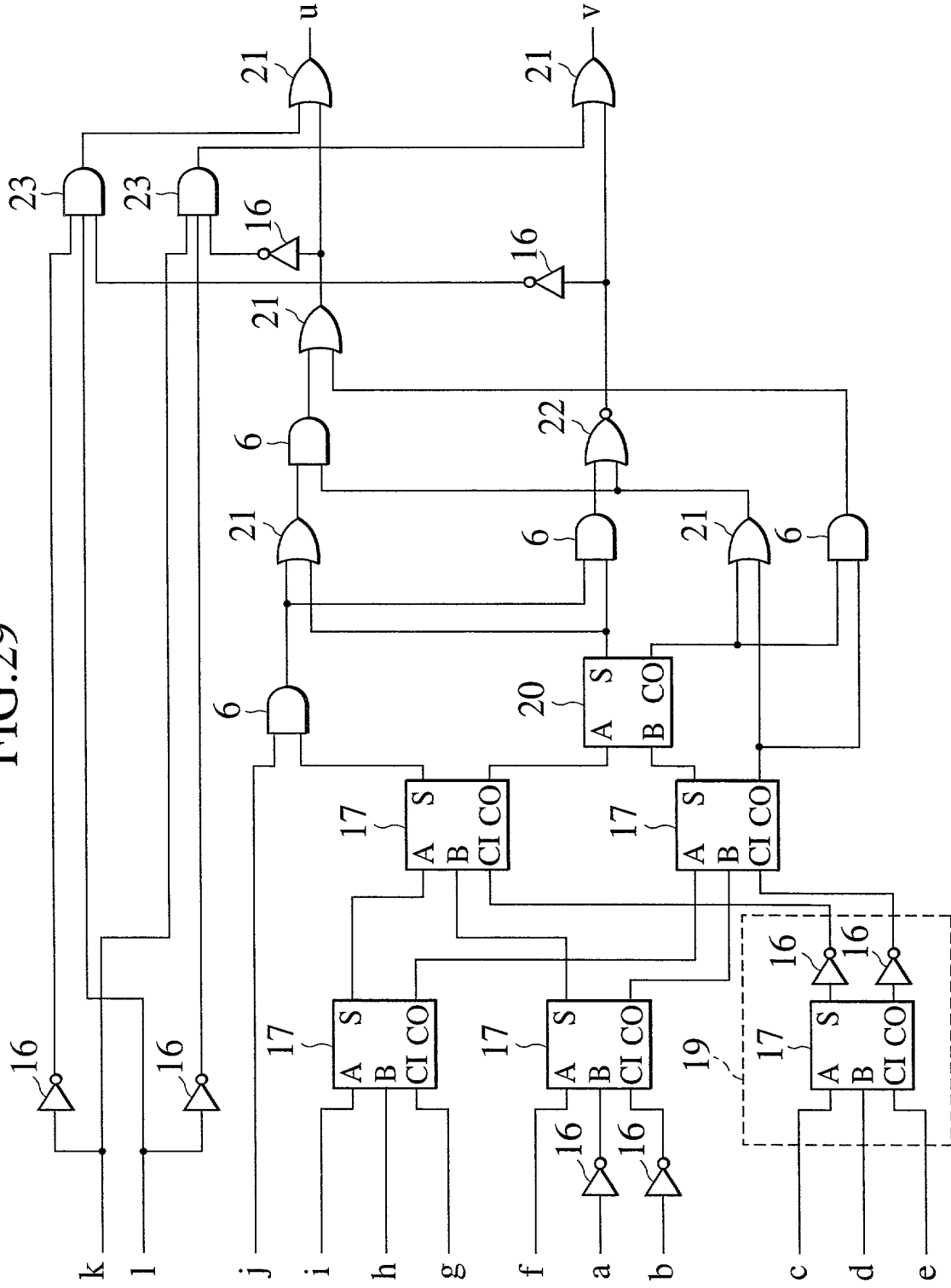




FIG. 31

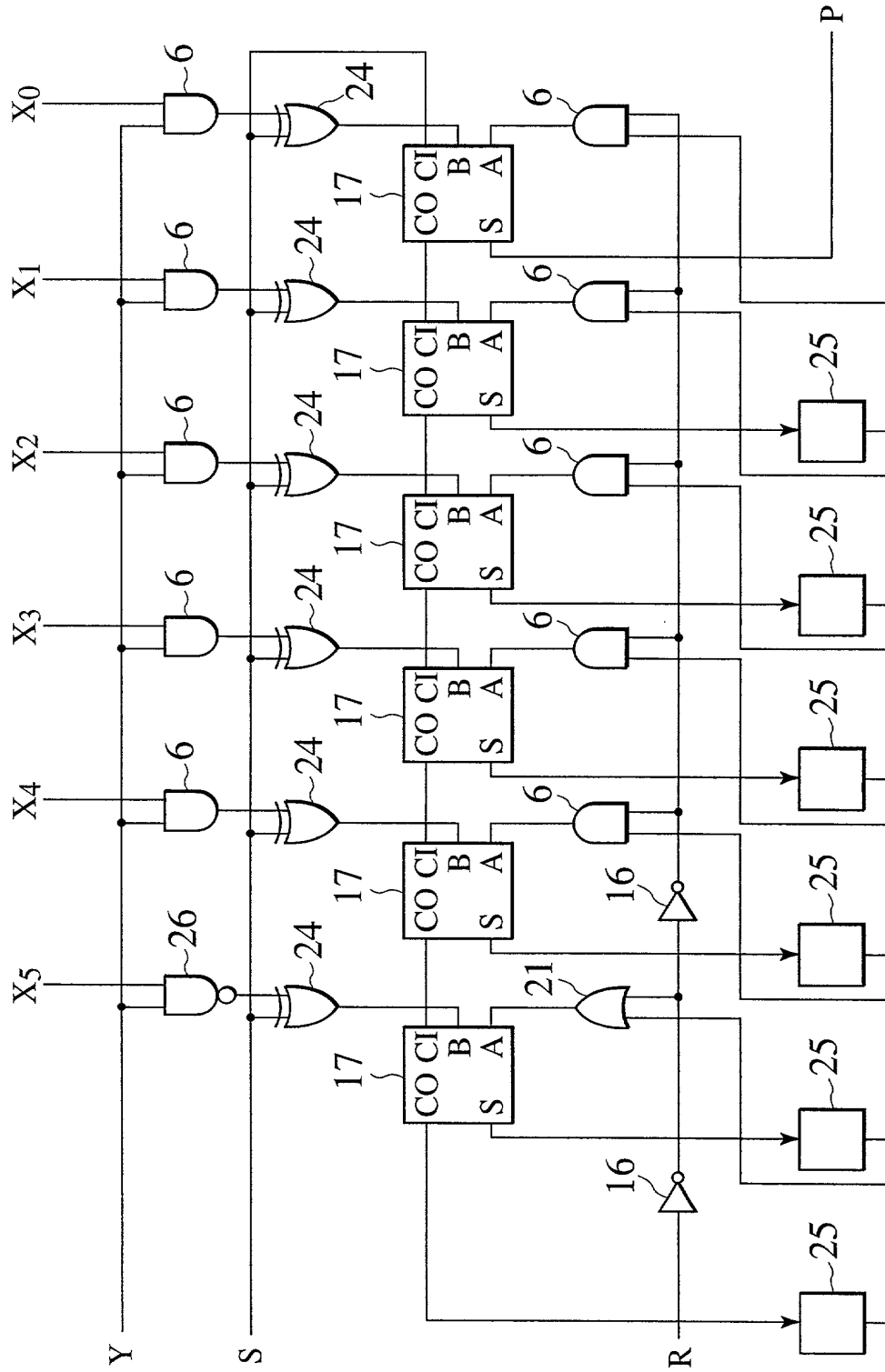


FIG.32

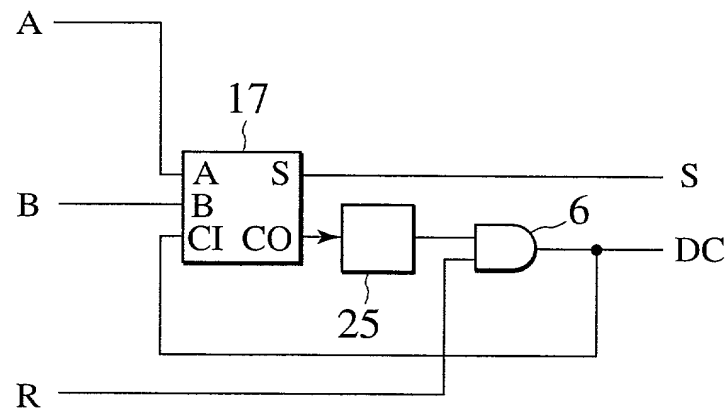


FIG.33

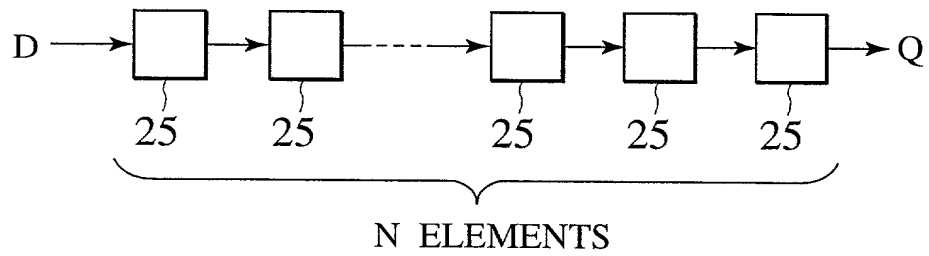


FIG.34

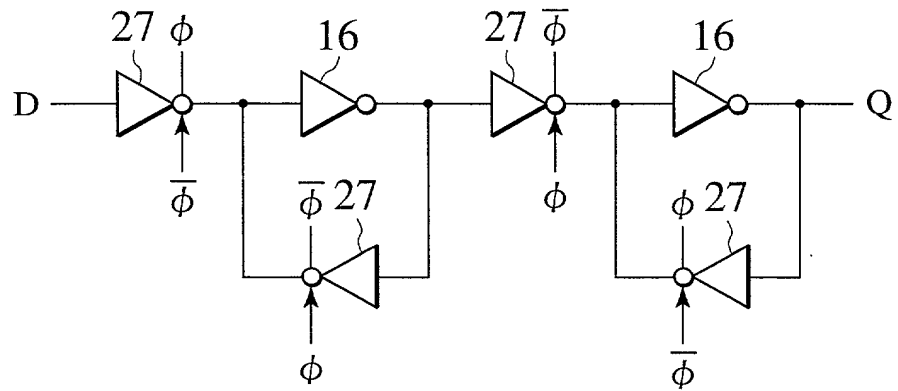


FIG.35

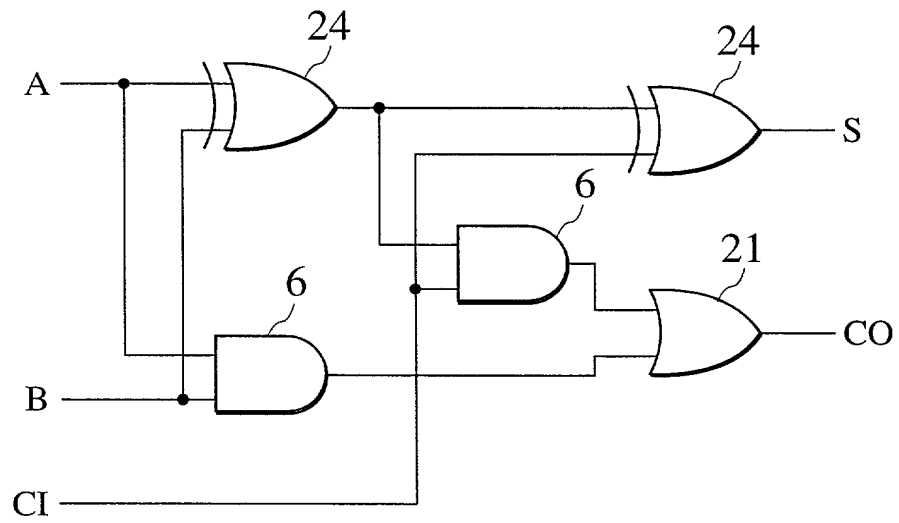


FIG.36

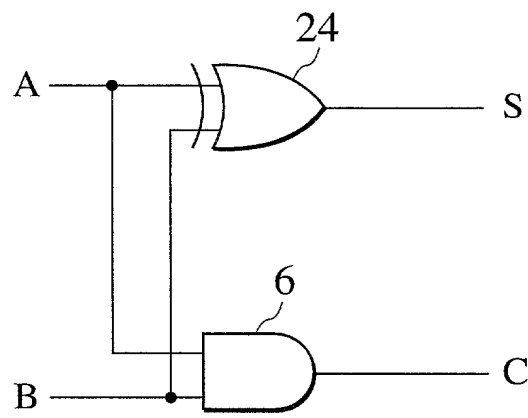


FIG.37

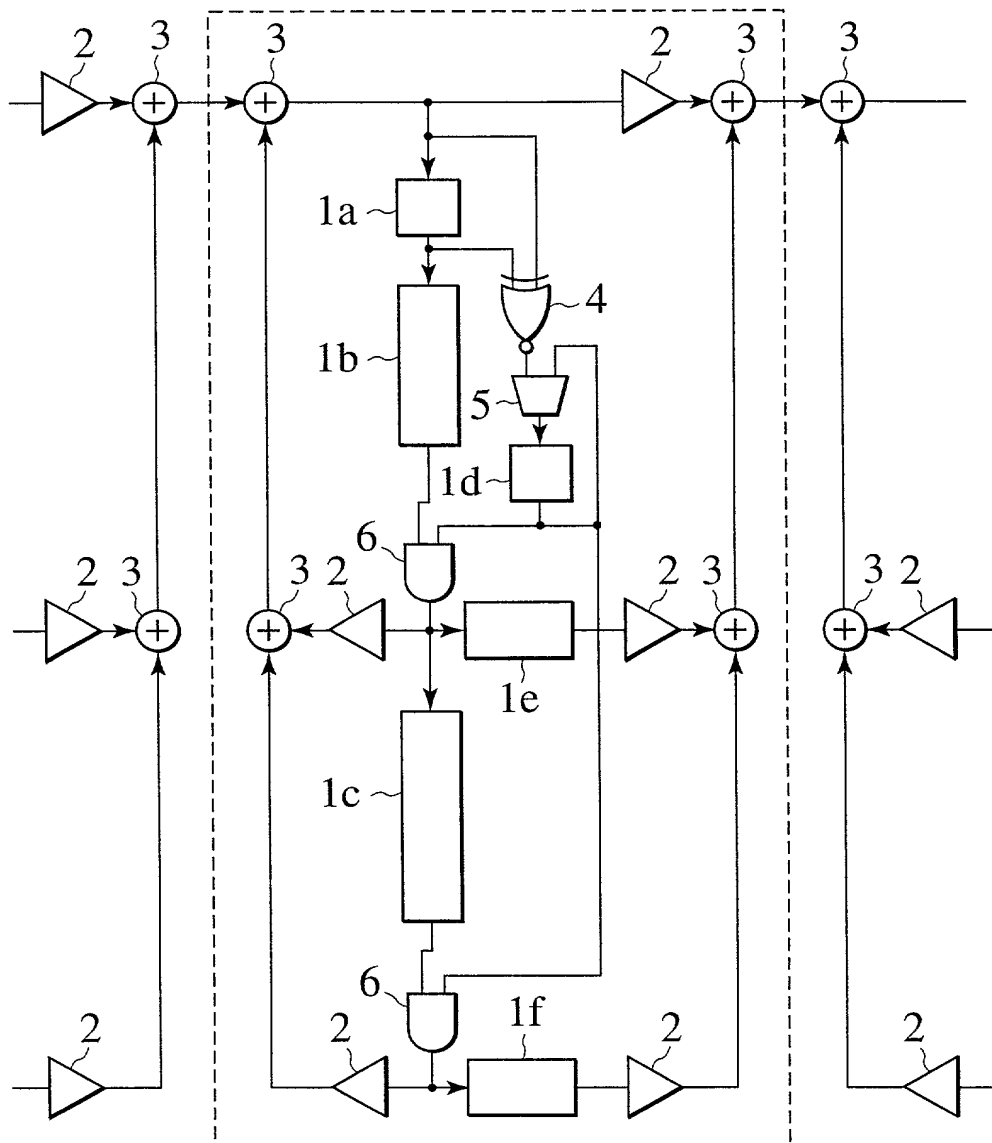




FIG.38

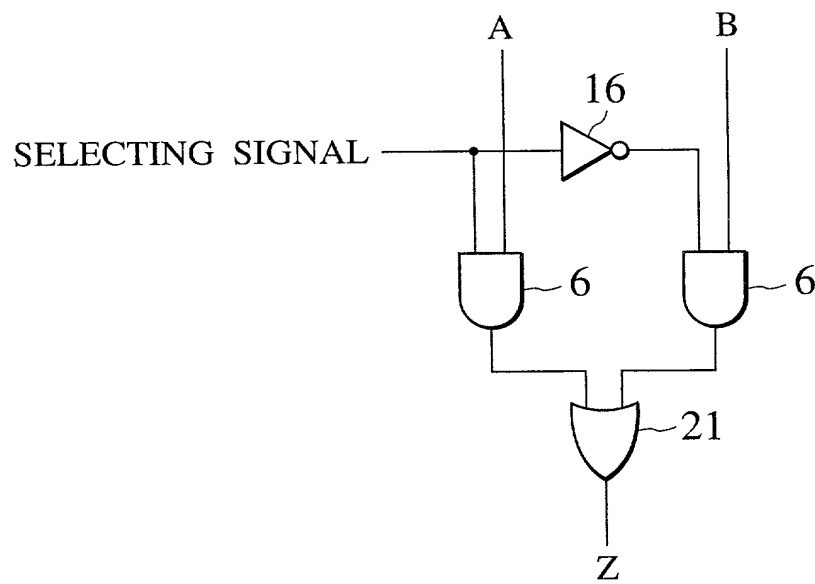


FIG.39(a)

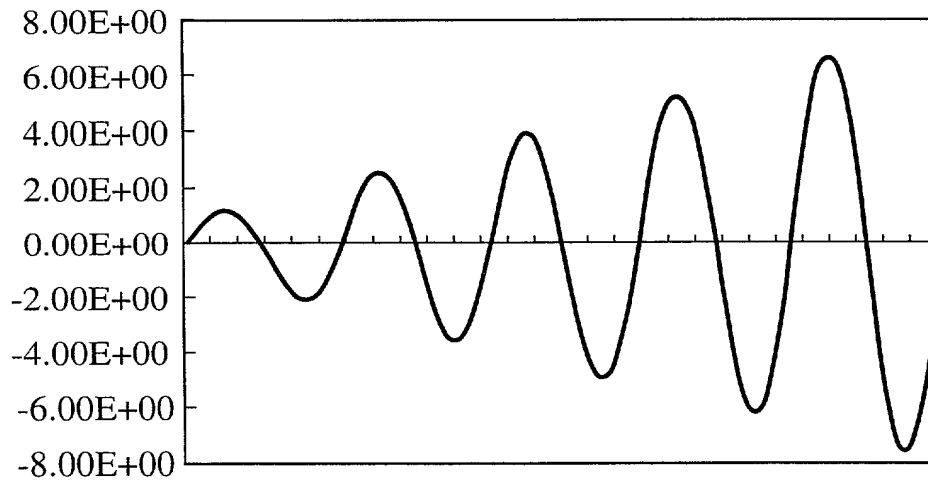


FIG.39(b)

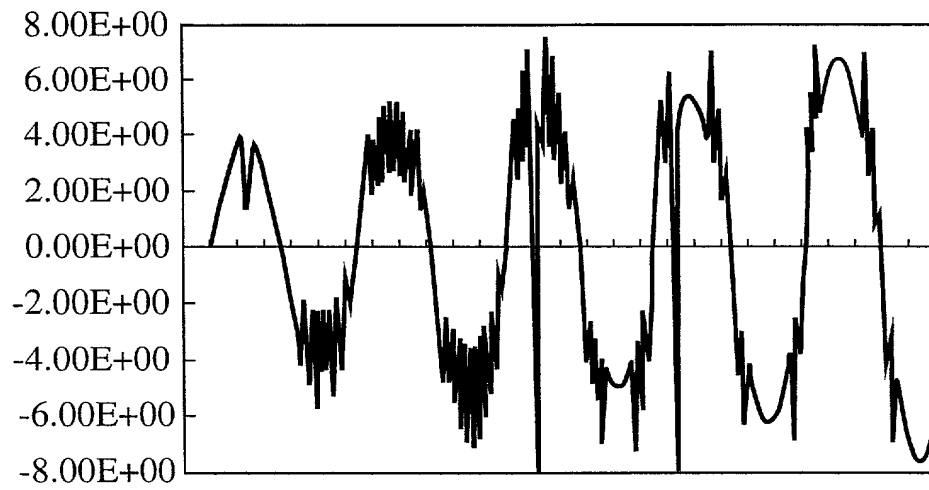


FIG.40(a)

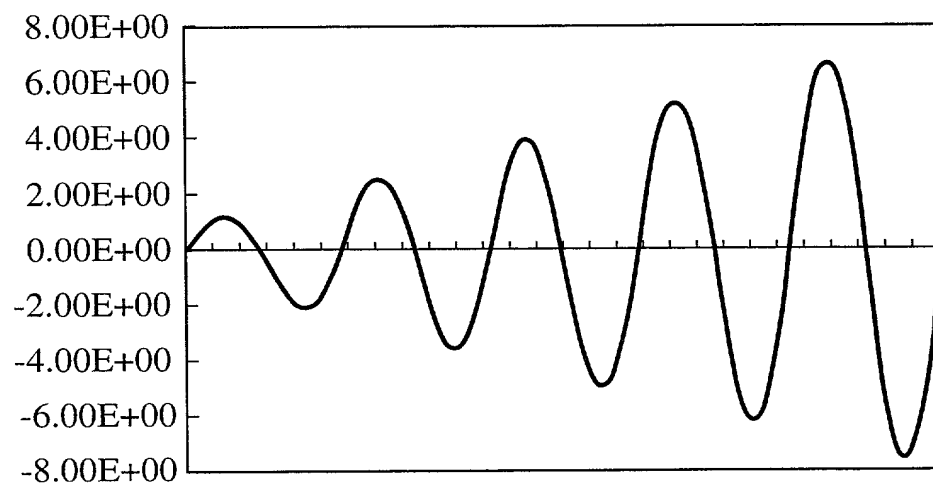


FIG.40(b)

